CLAIMS

What is claimed is:

1. A system for matching a harness of conductors with apertures in a connector, the system comprising:

a harness having a plurality of conductors;

a connector having a plurality of apertures for receiving the conductors;

a computer having a visual display for displaying information to a user;

a data base coupled to the computer, the data base having information regarding the conductors and the connector;

reading means coupled to the computer for reading information associated with individual ones of the conductors; and

a light array coupled to the computer and connectable to the connector, the light array having a plurality of light conductors for illuminating individual ones of the apertures in the connector in response to commands from the computer in order to designate to the user the aperture in which each conductor should be located.

2. The system of claim 1, wherein the reading means comprises a microphone and software coupled to the computer for receiving voice information from the user regarding the conductors when read aloud by the user to identify the conductors.

3. The system of claim 1, wherein the reading means comprises a bar code reader and software coupled to the computer for scanning information from the conductors to identify the conductors.

4. The system of claim 1, wherein the reading means comprises a computer mouse and/or keyboard for manual entry of information from the conductors to identify the conductors.

5.   The system of claim 1, further comprising an input/output expander circuit coupled between the computer and the light array, the input/output expander circuit having a communication cable extending to the computer, and a light cable extending to the light array.

6.   The system of claim 1, wherein the light array back-lights a selected one of the apertures in the connector for the user to indicate the aperture in which a selected one of the conductors should be inserted.

7.   The system of claim 1, wherein the visual display of the computer graphically illustrates a selected one of the apertures in the connector to indicate the aperture in which a selected one of the conductors should be inserted.

8.   The system of claim 1, wherein the user selects an input method for reading information from the conductors from a list of options on the visual display of the computer.

9.   The system of claim 1, wherein the light array comprises a cover plate, an array of LEDs mounted to a circuit board on the cover plate, a separation plate mounted to the cover plate over the array of LEDs, a light rod guide plate mounted to the separation plate, a mating connector for coupling with the connector and having a plurality of apertures, a light rod extending between each of the apertures in the mating connector and each of the LEDs, and a covering for integrating components of the light array.

10.   The system of claim 9, wherein the light rod guide plate accommodates various diameters of light rods.

11.   A system for matching a harness of conductors with apertures in a connector, the system comprising:

a plurality of harnesses, each having a plurality of conductors;

a plurality of connectors, each having a plurality of apertures for receiving terminal ends of the conductors;

a computer having a visual display for displaying information to a user;

a data base coupled to the computer, the data base having information regarding the conductors and the connectors;

reading means coupled to the computer for reading information associated with individual ones of the conductors and the connectors; and

a light array coupled to the computer and connectable at least one of the connectors, the light array having a plurality of light conductors for back-lighting an associated one of the apertures in a selected one of the connectors in response to commands from the computer in order to designate to the user the aperture in which each terminal end should be inserted.

12.   The system of claim 11, wherein the reading means comprises a head set and software coupled to the computer for receiving voice information from the user regarding the conductors and the connectors when read aloud by the user to identify the conductors and the connectors.

13.   The system of claim 11, wherein the reading means comprises a bar code reader and software coupled to the computer for scanning information from the conductors and the connectors to identify the conductors and the connectors.

14.   The system of claim 11, wherein the visual display of the computer graphically illustrates the associated one of the apertures in the selected one of the connectors.

15.   The system of claim 11, wherein the user selects an input method for reading information from the conductors and the connectors from a list of options on the visual display of the computer.

16. The system of claim 11, wherein the light array comprises a cover plate, an array of LEDs mounted to a circuit board on the cover plate, a separation plate mounted to the cover plate over the array of LEDs, a light rod guide plate mounted to the separation plate, a mating connector for coupling with the connector and having a plurality of apertures, a light rod extending between each of the apertures in the mating connector and each of the LEDs, and a covering for integrating components of the light array.

17.   A method of matching a harness of conductors with apertures in a connector, the method comprising:

(a)   providing a harness having a plurality of conductors, and a connector having a plurality of apertures for receiving the conductors;

(b)   selecting one of the conductors and inputting information related to said one of the conductors into a computer;

(c)   displaying information on the computer;

(d)   illuminating a corresponding one of the apertures in the connector via a command from the computer;

(e)   inserting said one of the conductors into said corresponding one of the apertures; and then

(f)   repeating steps (b) through (e) for another one of the conductors until all of the conductors are terminated in the connector.

18.   The method of claim 17, wherein step (b) comprises receiving voice information from a user regarding the conductors when read aloud by the user to identify the conductors.

19.   The method of claim 17, wherein step (b) comprises scanning information from the conductors to identify the conductors.

20.   The method of claim 17, wherein step (b) comprises manual entry of information from the conductors to identify the conductors.

21.   The method of claim 17, wherein step (d) comprises back-lighting the apertures in the connector.

22.   The method of claim 17, further comprising the step of allowing a user to select an input method for inputting information from the conductors.